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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A storage media for a latent heat storage system comprising a composition for storing heat, comprising at least one heat storage material and at least one auxiliary for aiding heat transmission, wherein at least one of the at least one heat storage material has at least one solid/solid phase transition, is solid throughout the application range, and comprises a dialkyl ammonium salt conforming to the empirical formula:

wherein each of R1 and R2 is, independently, C_1 - C_{30} alkyl or C_1 - C_{30} hydroxyalkyl, each of R3 and R4 is a radical H, and X^{n-} is a monoatomic, an organic or a complex inorganic anion, where n is the ionic charge of the anion.

2 - 10. (Canceled)

11. (Currently Amended) A storage media composition for storing heat according to Claim 38, wherein the auxiliary comprises paraffin.

12. (Canceled)

13. (Currently Amended) A storage media composition for storing heat according to Claim 39, wherein the composition is in the form of fibers, with the binder serving simultaneously as fiber base material.

- 14. (Currently Amended) A storage media composition for storing heat according to Claim 39, wherein the composition is in the form of fibers, with a natural or synthetic fiber forming the basic structure of the fiber and the binder or binders together with the heat storage material forming a coating around this fiber.
- 15. (Currently Amended) A storage media composition for storing heat according to Claim 39, wherein the composition is in the form of a coating on a surface or around a textile fabric.

16 - 17. (Canceled)

18. (Currently Amended) A storage media composition for storing hear according to Claim 39, wherein the binder comprises an inorganic binder comprising a water-insoluble silicate, a phosphate, a sulfate or a metal oxide.

19 - 21. (Canceled)

22. (Currently Amended) A foam comprising a composition according to Claim 41, for imparting thermostatic properties to clothing.

23. (Canceled)

- 24. (Previously Presented) A building comprising a composition according to Claim 18, in a manner so as to enable thermostating.
- 25. (Currently Amended) A storage media composition according to Claim 1, wherein Xⁿ is fluoride, chloride, bromide, iodide, nitrate, chlorate, perchlorate, sulfate, phosphate, tetrachlorochromate, tetrachloromanganate, tetrachlorocadmate, tetrachloropalladate,

tetrachloroferrate, formate, acetate, propionate, butyrate, caprate, stearate, palmitate, acrylate, oleate, oxalate, malonate, succinate, glutarate, benzoate, 2-nitrobenzoate, salicylate or phenyl-acetate.

26. (Canceled)

- 27. (Currently Amended) A storage media composition according to Claim 1, wherein R1 and R2 have identical carbon chain lengths.
- 28. A storage media composition according to Claim 34, (Currently Amended) wherein the one heat storage material comprises dioctylammonium chloride, didecylammonium chloride, didodecylammonium chloride, dioctadecylammonium chloride, dihexylammonium bromide, didecylammonium bromide, didodecylammonium bromide, dioctadecylammonium bromide, dihexylammonium nitrate, dioctylammonium nitrate, didecylammonium nitrate, dioctylammonium chlorate. dioctylammonium dioctylammonium acetate, formate, didecylammonium chlorate. didecylammonium didecylammonium acetate, formate, didodecylammonium chlorate, didodecylammonium formate, didodecylammonium hydrogensulfate, didodecylammonium propionate, dibutylammonium-2-nitrobenzoate, or didodecylammonium nitrate.
- 29. (Currently Amended) A storage media composition according to Claim 39, wherein the auxiliary comprises a metal powder or a metal granule or graphite, wherein the heat storage material is mixed with the auxiliary.
- 30. (Currently Amended) A storage media composition according to Claim 39, wherein the binder comprises a polymeric binder, in turn comprising is a polyurethane, a nitrile rubber, chloroprene, polyvinyl chloride, a silicone, an ethylene-vinyl acetate copolymer or a polyacrylate.

- 31. (Currently Amended) A storage media composition according to Claim 1, wherein Xⁿ is an organic ion.
- 32. (Currently Amended) A storage media composition for storing heat according to Claim 1, wherein one heat storage material comprises a compound wherein its low-temperature form crystallizes in a sheetlike perovskite type.
- 33. (Currently Amended) A storage media composition for storing heat according to Claim 1, wherein one heat storage material comprises mixed crystals of different dialkylammonium salts.
- 34. (Currently Amended) A storage media composition for storing heat according to Claim 1, wherein one heat storage material comprises diethylammonium chloride, dibutylammonium chloride, dipentylammonium chloride, chloride, dipropylammonium dihexylammonium chloride, dioctylammonium chloride. didecylammonium chloride, dioctadecylammonium chloride, diethylammonium bromide, didodecylammonium chloride, bromide, dibutylammonium bromide, <u>dipentylammonium</u> bromide. dipropylammonium didecylammonium dihexylammonium bromide. dioctylammonium bromide, bromide, dioctadecylammonium bromide, diethylammonium nitrate, didodecylammonium bromide, dipentylammonium nitrate, dipropylammonium nitrate, dibutylammonium nitrate, dihexylammonium nitrate. dioctylammonium nitrate, didecylammonium nitrate, dioctylammonium diundecylammonium nitrate, didodecylammonium nitrate, chlorate, dioctylammonium dioctylammonium formate. didecylammonium chlorate, acetate. formate, didodecylammonium chlorate. didecylammonium acetate, didecylammonium didodecylammonium hydrogensulfate, didodecylammonium didodecylammonium formate, propionate, or dibutylammonium-2-nitrobenzoate.

35. (Currently Amended) A storage media composition for storing heat according to Claim 1, wherein the heat storage material has an average crystallite size of about 0.1 to about 1000 µm, and the material is insoluble in water.

- 36. (Currently Amended) A storage media composition for storing heat according to Claim 1, wherein the application range of the heat storage material has a solid/solid phase transition which has an enthalpy of at least about 50 J/g.
- 37. (Currently Amended) A storage media composition for storing heat according to Claim 1, wherein the application range of the heat storage material has a solid/solid phase transition which lies within the temperature range of about -100°C about 150°C.
- 38. (Currently Amended) A storage media composition for storing heat according to Claim 1, wherein the at least one auxiliary comprises a substance or preparation having good thermal conductivity in the form of a loose bed or in the form of shaped bodies.
- 39. (Currently Amended) A storage media composition for storing heat according to Claim 1, wherein the at least one auxiliary comprises a binder finely distributed with the crystallites of the heat storage material.
- 40. (Currently Amended) A storage media composition for storing heat according to Claim 39, wherein the binder comprises a polymeric binder, in turn comprising is a curable polymer or polymer precursor polyurethane, a nitrile rubber, chloroprene, polyvinyl chloride, a silicone, an ethylene-vinyl acetate copolymer or a polyacrylate.
- 41. (Currently Amended) A storage media composition for storing heat according to Claim 1, wherein the composition is present in the form of an open-celled or closed-celled foam, with the auxiliary.

- A storage media composition according to Claim 1, (Currently Amended) 43. wherein the heat storage material has an average crystallite size of about 0.1 - about $1000~\mu m$.
 - (Canceled) 44.

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7